

CLAIMS:

1. A fluid mixing block for mixing fluid components of a reactive solution, comprising:
 - a mixing block housing;
 - at least two inlet ports and respective at least two inlet chambers formed within the mixing block housing, wherein the two inlet port and inlet chamber accepts an injection of a fluid at a first pressure from a supply source;
 - a mixing chamber, formed within the mixing block housing, wherein fluids injected from the inlet chambers are combined and mix to form a solution of desired reactivity at a lower pressure than the first pressure; and
 - a dispensing port, formed within the mixing block housing, wherein the desired solution exits the mixing block housing.
2. The fluid mixing block of claim 1, further comprising:
 - at least three individual chamber plugs, which are removably fastened to the mixing block housing to allow for manual visual inspection, cleaning, and adjustments of the inlet and mixing chambers;
 - wherein a supply filter is mechanically fastened to an inlet chamber plug for filtering out suspended particles within a fluid flowing therethrough to prevent clogging of downstream chambers or other parts.
3. The fluid mixing block of claim 1, further comprising:
 - a backflow preventing valve/flow rate reducing orifice unit attached to the mixing block housing between each inlet chamber and the mixing chamber to reduce a rate of flow of fluid flowing therethrough and to prevent fluid from flowing back upstream into a fluid supply source.

4. A fluid mixing block for mixing fluid components of a reactive solution, comprising:
 - at least a first and second inlet port and an outlet port;
 - at least a first and second inlet chamber and a mixing chamber;
 - a first backflow device coupled between the first inlet chamber and the mixing chamber;
 - a second backflow device coupled between the second inlet chamber and the mixing chamber;
 - a first fluid located in the first inlet chamber at a first pressure, and the first fluid located in the mixing chamber at a second pressure that is less than the first pressure; and
 - a second fluid located in the second inlet chamber at one pressure, and the second fluid located in the mixing chamber at another pressure that is less than the one pressure.
5. The fluid mixing block of claim 4, further comprising:
 - at least three individual chamber plugs, which are removably fastened to the mixing block to allow for manual visual inspection, cleaning, and adjustments of the first, second and mixing chambers.
6. The fluid mixing block of claim 5, wherein a supply filter is mechanically fastened to an inlet chamber plug for filtering out suspended particles within a fluid flowing therethrough to prevent clogging of downstream chambers or other parts.
7. The fluid mixing block of claim 6, wherein the first and second backflow device is configured to reduce a rate of flow of fluid flowing therethrough and to prevent fluid from flowing back upstream into a fluid supply source.